

Claims

1. A composition comprising plant growth regulating substances which composition is a sterilized culture filtrate recovered from a culture of fungal spawn incubated in a medium containing at least 10% available carbohydrate in the presence of long wavelength light, and in the substantial absence of agitation, wherein said medium further contains potassium ion and carotene.

2. A formulation for application to enhance plant growth and/or development which formulation comprises an effective amount of a composition comprising plant growth regulating substances, which composition is an optionally dried sterilized culture filtrate recovered from a culture of fungal spawn incubated in a medium containing at least 10% available carbohydrate in the presence of long wavelength light and in the substantial absence of agitation, wherein said medium further contains potassium ion and carotene.

3. The formulation of claim 2, wherein the BRIC value of the medium is 12-15.

4. The formulation of claim 2, wherein said medium comprises molasses and/or pineapple or papaya syrup or juice.

5. The formulation of claim 2, wherein said medium contains sufficient carotene to impart a yellow color, and  $K^+$  of 0.01%-0.1% wt/vol.

6. The formulation of claim 2, wherein said fungal spawn is a spawn of a *Basidiomycete*.

7. The formulation of claim 6, wherein the *Basidiomycete* is a *Polyporus* fungus.

8. The formulation of claim 7, wherein the *Polyporus* is a brown rot *Polyporus*.

9. The formulation of claim 8, wherein the brown rot *Polyporus* is a *Laetiporus*.

10. A method to prepare a composition comprising plant growth regulators, which method comprises sterilizing the filtrate of a fungal spawn culture which culture has been grown

in medium containing at least 10% available carbohydrate in the presence of long wavelength light and in the substantial absence of agitation, wherein said medium further contains potassium ion and carotene.

11. A method to prepare a composition containing plant growth regulators, which method comprises

culturing fungal spawn in a medium containing at least 10% available carbohydrate in the presence of long wavelength light and in the substantial absence of agitation, wherein said medium further contains potassium ion and carotene;

recovering a culture filtrate;

denaturing soluble proteins in the filtrate and removing said denatured proteins; and

sterilizing the remaining culture filtrate to obtain said composition.

12. The method of claim 11, wherein the medium contains sufficient carotene to impart a yellow color, and  $K^+$  of 0.01%-0.1% wt/vol.

13. The method of claim 11, which said culture filtrate is recovered by filtering said culture.

14. The method of claim 11, wherein said denatured proteins are removed by filtering.

15. The method of claim 10, wherein said sterilizing is by pasteurization.

16. The method of claim 11, wherein said sterilizing is by pasteurization.

17. The method of claim 10, wherein said fungal spawn is a spawn of a *Basidiomycete*.

18. The method of claim 17, wherein the *Basidiomycete* is a *Polyporus* fungus.

19. The method of claim 18, wherein the *Polyporus* is a brown rot *Polyporus*.

20. The method of claim 19, wherein the brown rot *Polyporus* is a *Laetiporus*.

21. A method to enhance plant growth, development or bulk, which method comprises contacting the seeds or at least a portion of said plant with the formulation of claim 2.

22. The method of claim 21, wherein said formulation further contains at least one pesticide and/or at least one nutrient and/or at least one herbicide.

23. The method of claim 21, wherein said formulation further contains at least one elicitor of phytoalexin production.

24. The formulation of claim 2 which comprises diatomaceous earth or fertilizer particles coated with said composition.

25. The method of claim 21 which further comprises contacting the seeds or at least a portion of said plant with at least one pesticide and/or at least one nutrient and/or at least one herbicide.